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Studies on the Mundurucu Tribe: A Memoir Written and Read before the Brazilian Historical and Geographic Institute by Engineer Antonio Manoel Gonçalves Tocantins, Corresponding Fellow of the Institute.

I

Journey to the central Mundurucu villages, situated in the valley of the Upper Tapajoz. -- Itinerary from Belém, capital of the province of Pará, to those villages. -- Scenes of savage life.

I left Belem on the eighteenth of June, 1875, bound for the Upper Tapajoz.

The journey up the Amazon from Belém to Santarém and up the Tapajoz from Santarém to Itaituba takes five days on one of the big steamers of the Companhia do Amazonas.

At Itaituba I embarked in a small canoe manned by eight Indians, nearly all of the Mauć tribe, and proceeded through the falls of the Upper Tapajoz.

Ten days later I reached the Mission of Bacabal, which was founded by order of the Imperial Government and established on the right bank of the Tapajóz on the twenty-third of February [74]1872.

Translator's Note:

Whenever possible, the spelling of Portuguese and aboriginal words -- including names of places, tribes, rivers, plants, native foods and implements -- has been changed to its modern Brazilian equivalent.

Portuguese personal names and trade names, book titles, aboriginal word lists and Mundurucu quotations have been left untouched, as have a few other native words of uncertain phonetic rendition and those that would require the use of letter combinations equally foreign to present-day Portuguese.

2. ABORIGINAL CULTURE•

[21] The brief outline of the aboriginal culture of the Munduruc\u00fa which follows is based chiefly on traditional knowledge and the memories of informants, supplemented by the writer's observation of those features which are extant. Only slight reference has been made to historical sources due to their relative unreliability and also because of the absence of data in them on the socio-economic organization, which is our major interest in this work. This section does not pretend to be an ethnography of the Munduruc\u00fa, but will be focussed on the delineation of the basis of Munduruc\u00fa socio-cultural integration. It will thus provide a baseline for the study of Munduruc\u00fa culture change.

The Economy

105 [13] The Munduruc\u00fa are essentially forest dwellers. Although their aboriginal villages are located on high savannahs at the headwaters of the eastern tributaries of the Tapaj\u00f3s River, they depended on the resources of the forests and rivers for their subsistence. Their economy did not differ greatly from that of other Tropical Forest

• Because Munduruc\u00fa culture has suffered considerable attrition and because this culture loss has been felt in varying degrees in different areas of modern occupation, it is expedient to use the past tense throughout this chapter. It should be remembered that many traits still exist, especially those outside the realm of warfare and ceremonial. The later chapter on the contemporary Munduruc\u00fa will indicate what is now present or absent.

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Matrilocality and Patrilineality in Mundurucú Society

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UNILINEAL descent and unilocal residence, by definition, follow one of but two possible lines, the male or the female. Simple arithmetic would therefore dictate that there are four possible combinations of common descent and residence. Only three of the combinations, however, are found to have any frequent and reliable occurrence. Kroeber (1952:213) noted the single lapse in the following observation:

> "Logically the possibility arises of a fourth plan of society: matrilocal but patrilineal . . . I do not know of such a society, and should expect its occurrence to be rare."

This combination is certainly unusual, and ethnographic literature yields practically no descriptions of its unequivocal occurrence. In most cases, the unilocality or unilineality of the group is questionable. For example, Loeb and Broek (1947:418) claim the Karen people of Burma to have patrilineal clans and matrilocal residence. However, the sources which they cite in support of this contention (Marshall 1922; Heine-Geldern 1923) do not warrant such positive affirmations as to the rule of descent. This conclusion with regard to the Karen is verified by Murdock (1954). Residence rules are likewise subject to misinterpretation, for in many cultures matrilocality is frequently a temporary state followed by permanent patrilocality.

In 1952 the writer discovered the co-existence of matrilocality and patrilineality among the Mundurucú Indians of the upper Tapajós River in central Brazil.[1] Existing information on the Mundurucú had led me to believe, before field research, that the group was patrilocal. Subsequent field investigation proved the contrary to be true, and gives us one of our few authenticated accounts of a patrilineal group in which postmarital residence is permanently matrilocal.

The purpose of this paper is to present the pertinent data for the use of students of social organization, to describe how such a system functions, and to discuss its significance in terms of the evolution of social structure. Consideration of the latter problem will be reserved until the conclusions of this paper, for much of the discussion will hinge upon what seems incongruous, nonfunctional, or dysfunctional in Mundurucú society. This material, when analyzed with reference to the limited amount of historical data available, suggests strongly that the Mundurucú shifted from patrilocality to matrilocality in the first half of the nineteenth century. The bearing of such a change upon Murdock's observations (1949:190) on the difficulty of a transition from patrilineal to matrilineal descent becomes immediately apparent when it is considered that much of Murdock's position depends upon his persuasive argument that a patrilineal society can change from patrilocality to matrilocality only with great difficulty. It would seem that this shift in residence patterns is possible under certain conditions which will be analyzed functionally among the Mundurucú. Matrilocality, following Murdock's use of residence as a determinant

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of descent, is one of the preconditions to the development of matrilineality.[2] That the latter change never occurred among the Mundurucú can be partially explained by the fact their subsequent involvement in the commercial exploitation of wild rubber has resulted in bilocality and neolocality (Murphy 1954).

It is because of this later breakdown of unilocality that my description of Mundurucú social organization will refer to mid-nineteenth century Mundurucú society. Much of the social structure described below is still observable in certain conservative Mundurucú villages and served to supplement and corroborate information obtained from old informants.

THE MUNDURUCÚ

Since Mundurucú culture is not well documented, even for a South American group, a few prefatory remarks are in order. Linguistically, the Mundurucú have been classified as "remotely" Tupian by Nimuendajú (1938:975). However, a summary comparison of Mundurucú and Tupí indicates that if a genetic relationship does exist, it could only be very obscure and distant. It is possible that the substantial number of Tupian loan words in the Mundurucú lexicon had led Nimuendajú to an erroneous conclusion. The final resolution of this problem will be of importance to the prehistory of the Mundurucú and of the entire central Amazon basin.

The Mundurucú first came to the attention of the chroniclers in the late eighteenth century when they launched a series of strong raids against other Indian tribes and white colonists in the lower Amazon Valley. Their late appearance on the historical scene and subsequent northward thrust into the waters of the lower Madeira River suggest that the Mundurucú originated in the highlands of Mato Grosso and thence migrated northwards. However, their only known homeland is in the region of mixed gallery forest and savannah east of the upper Tapajós River, between 6° and 8° south latitude. This is where the remnants of the tribe are located today.

After their pacification by Portuguese colonial forces at the end of the eighteenth century, the Mundurucú entered into a long period of peaceful symbiosis with the whites (Almeida Serra 1869:4–5). Traders and government officials capitalized on the renowned aggressiveness of the Mundurucú by employing them as mercenary warriors against tribes still hostile to the whites. In 1835, their services were sought in the suppression of the Revolution of the Cabanas (Hartt 1885:132), and at the end of the nineteenth century their war parties were still being enlisted by the rubber traders of the Madeira River (Coudreau 1897:59). Fighting was not the only source of trade goods for the Mundurucú. Since earliest times, the white settlers of the Amazon valley have exploited the natural products of the region to the neglect of agriculture. The resultant shortage of local sources of subsistence forced them to rely in part upon the products of the Indian gardens. Thus, the Mundurucú were deeply involved in the sale of surplus manioc flour as early as 1819 (Martius 1867: 395). Manioc flour continued to be their principal trade commodity until the late nineteenth century, when wild rubber assumed primacy (Tocantins 1877).

The middle of the nineteenth century found the Mundurucú of the upper

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The vocative kinship terminology, male speaking, resembles the Tupi-Guarani type system discussed by Wagley and Galvão (1946). It is bifurcate merging, and Ego has only brothers and sisters on his own generation. A significant departure from the generation principle is found in the equivalence of mother's mother and father's sister, both subsumed under the term *awak*. The identification of these two relatives is continued in the referential system. This classification could come about as a result of the practice of sister's daughter, or avuncular, marriage operating in conjunction with the cross-cousin marriage expectable in a moiety system. With cross-cousin marriage, Ego's mother's father and the father's mother are brother and sister, and, when combined with avuncular marriage, Ego's father's sister is a possible wife for the mother's father. Thus viewed, Ego's mother's father's wife, or mother's mother, is the same person as the father's sister.

Further support for this theory comes from the referential terminology, which, I might suggest, is perhaps more conservative than the vocative. The mother's brother's children and the sister's children are referred to as *we xbi*, a logical result if the mother's brother marries Ego's sister under the rule of avuncular marriage. To further classify the brother's wife as *we xbi* is illustrative of both cross-cousin and avuncular marriage. The equivalence of mother's brother and father's sister's son is a function of their possible identity under conditions of avuncular marriage. Although contemporary Mundurucú informants deny that sister's daughter marriage ever existed and affirm it to be proscribed, this disparity between the kinship system and actual practice will be seen to be a result of culture lag.

The method of analysis employed above seems to follow almost completely that used by Rivers (1914), and is no doubt in violation of Murdock's dictum (1949:123) that marriage customs are likely to operate as determinants of kinship structure only "when they apply to all or most marriages within a society." It should therefore be noted that the Mundurucú kinship system, as analyzed above, is not structured by the practice of avuncular marriage, or cross-cousin marriage, or the levirate, or the sororate but by all four practices working as codeterminants within a patrilineal framework.[3] In terms of the kinship system these marriage customs are all functionally interrelated, and together they may well have comprised the majority of Mundurucú marriages at one time. Murdock states (ibid:126) the above implied limitations of the statistical method in the following:

> "Since multiple factors are nearly always operative, perfect statistical correlations between any particular kinship determinant and the terminological features that it tends to produce should never be expected, even if the hypothesis is entirely sound."

All Mundurucú considered themselves to be related to all other Mundurucú by ties of varying degrees of closeness. One's closest relatives were the members of the nuclear family. Beyond this, the clan became the unit of greatest solidarity, and the Mundurucú emphasized their brotherhood with fellow members. They also felt a closer affinity for members of their own moiety as contrasted

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591 tems, despite combining matrilocality and patrilineality. Contemporary in-
174 formants claim matrilocality to be the normal rule since ancient times, but historical data suggestive of antecedent patrilocality among the Mundurucú comes from the German explorers Spix and Martius, who encountered elements of the tribe near the lower Madeira River in 1819. The reader should be warned that these observers are not completely reliable, and several obvious errors were encountered in their works. We can only verify their information by comparing it with what is reliably known of the structure of Mundurucú society.

604 According to Martius (1867:393), the Mundurucú were apparently patri-
174 local, for a man could eject his wife from the household. Every young man,
591 however, had to go through a period of bride service lasting several years (ibid:393). The same writer claimed that when there was no other potential husband available for a young woman, the mother's brother could marry her (ibid:393). This is of some significance, not only because it gives historical confirmation for the previous analysis from kinship terminology (and Martius was not aware of the "sociological" interpretation of kin terms), but also because it tends to bolster the hypothesis of antecedent patrilocality. The practice of avuncular marriage is quite widespread in the Amazon basin and in northeastern South America and the Islands (Lowie 1949:317). In all cases, it is correlated with a period of bride service followed by permanent patrilocality. Both Kirchoff (1932:58) and Metraux (1948:111-12) state that avuncular marriage serves to liberate men from the period of temporary matrilocal residence. Whether or not avuncular marriage had this function among the Mundurucú is not known, but its wide distribution in the Tropical Forest region in combination with initial bride service and patrilocality argues for its former existence among the Mundurucú where, according to Martius, the same pattern was in existence.

604 The reader will remember that contemporary Mundurucú informants
121 specifically and vehemently deny the contemporary or past practice of avuncu-
591 lar marriage, and this form of marriage was not reflected in genealogies. This is understandable in the matrilocal framework because, although the mother's brother was a member of the opposite moiety to that of his sister's daughter, he was nonetheless a member of the same household until his marriage. In a patrilocal society, the sister's daughter would not reside in the same household and might not even be a resident of her uncle's village. The disappearance of avuncular marriage due to a change from patrilocality to matrilocality would be consistent with much anthropological theorization on the origins of incest prohibitions, whether explained as a result of the necessity to deny sexual access to one's familial intimates, which would disrupt the household (Malinowski 1930:630), or as a result of the need to marry out of the ingroup in order to extend its ties with the larger society (White 1948:425). Titiev (1943:516) has noted the importance of residence in the definition of incest in other cultures:

> "... there are numerous cases in which exogamy is enforced among co-residents even when there is no demonstrable or putative genealogical connection."

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Contemporary students of social organization tend to accept the hypothesis of unilocal residence as the basis of unilineality, and there will perhaps not be much argument as to the priority of patrilocality among the Mundurucú. The dynamics and stages of the process are, however, an open question. Two dysfunctional or incongruous elements have been noted in the foregoing description of Mundurucú patrilineality and matrilocality. One of these is the patrilocality of the chief's sons. This can be explained quite simply as an accommodation of patrilineal inheritance to matrilocal pressure. However, a dysfunctional factor was thereby introduced, for the chief was able to build up a strong lineage-household in villages where such units were no longer possible for the balance of the population. Authority patterns might have become stronger and more centralized due to the new arrangement, but such controls were not essential to this simple, collectivized society.

The other incongruity in Mundurucú social structure was the clan ownership of the sacred trumpets. These cult objects functioned to reinforce the structure of the village and not of the clan or the tribe. The trumpet complex was part of village ritual and involved only village participation, despite the fact that spirits pertaining to the clan were appeased. However, the Mundurucú clan was completely nonlocalized under the conditions of matrilocality, and the clan-village equivalence suggested by the trumpet complex was therefore impossible. Certainly, contemporary informants were able to give no adequate rationalization of the connection between clans and trumpets. On the basis of these structural considerations I would hypothesize that the trumpet complex arose in the period of "the unilocal patrilineal lineage," following Titiev's (1943:524-25) second stage of development of the patrilineal clan. With localized clans, village and clan are the same unit (except for the wives of the clan members), and the sacred trumpets and their spirits would form part of a well integrated ancestor cult. Such a social structure, far from being completely hypothetical, is typical of the Northwest Amazon (Whiffen 1915), to choose an example from another part of the South American rain forest. The Mundurucú trumpets no longer functioned in this way, and the spirits which resided in the instruments were only incidentally considered ancestral to a certain clan. They actually served to protect and aid the village in which they were located.

On the basis of the above data and interpretations, a tentative reconstruction of Mundurucú social history will be attempted in the following paragraphs.

The earliest stage of Mundurucú evolution for which we have any significant evidence is that of the patrilocal, single-clan (or patrilineage) village or band. Each clan-village possessed sacred trumpets which embodied the ancestral spirits and were the property of the group. The pattern of referring to the clan as a 'people of the river' may have stemmed from the local nature of the early clan-residence unit.

In the normal process of population expansion, perhaps aided by the introduction of horticulture and the taking of captives, the Mundurucú localized clan might have become subdivided due to the limit of population concentra-

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Intergroup Hostility and Social Cohesion[1]

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GEORG SIMMEL (1955:33–4) noted that warfare is frequently the only mode of social interaction between primitive societies. He saw the social relations of such groups to be characterized by diametric opposition between the norms of behavior applicable to members of the ingroup, on one hand, and toward members of outgroups, on the other. This dichotomy was internally self-consistent to Simmel, and he wrote (ibid:34):

> For this reason, the same drive to expand and to act, which within the group requires unconditional peace for the integration of interests and for unfettered interaction, may appear to the outside world as a tendency toward war.

Intergroup conflict was viewed by Simmel has having positive functions: it provides the basis for group formation and cohesion, and it accentuates and maintains group boundaries. Conflict, then, is not aberrant or dysfunctional. Rather, it structures social relations both within and between societies.

Lewis Coser (1956:95), writing to Simmel's general thesis, points out that social cohesion does not automatically follow from conflict, for "social systems lacking social solidarity are likely to disintegrate in the face of conflict, although some unity may be despotically enforced." The corollary proposition is offered that:

> . . . if the basic social structure is stable, if basic values are not questioned, cohesion is usually strengthened by war through challenge to, and revitalization of, values and goals which have been taken for granted (ibid:90).

Coser's view by no means contradicts that of Simmel but is an elaboration of the latter's thesis, alluded above, that intergroup hostility and sociabcohesion are only analytically different aspects of the same social process. Conflict and social solidarity are mutually re-enforcing; conflict promotes social integration, and solidarity is necessary if the group is to take effective common action against the outer world.

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The present paper will analyze the warfare pattern of a Brazilian Indian group, the Munduruc, in the light of the propositions given by Simmel and elaborated by Coser. We will go beyond the thesis that warfare contributes to the maintenance of the social structure to consider also how this social structure organized the membership for military activity. Further, the thesis will be advanced that this type of social structure actually generated the bellicose activities and attitudes that functioned to preserve it, and that this circular relationship allowed Munduruc society to continue through a period during which it was subjected to severe internal and external threats. Finally, we will conclude with a general hypothesis upon the relation between social structure, social cohesion, and conflict.

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CONCLUSION

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Our analysis of the functions of Mundurucú warfare has concluded that the institution operated to preserve the integration and solidarity of Mundurucú society. These findings accord closely with Simmel's theory of conflict and are also substantiated by Fernandes' (1952:354) conclusion on the functions of Tupinamba warfare. The means by which this social end was accomplished can be viewed as a variable of the Mundurucú type of society. The latter was of a unique order; it was structured so as to ramify kinship bonds throughout the tribe, but it was extremely vulnerable to any open display of aggression within the group. This, and the ambivalent position of the men, resulted in the suppression of hostility and the emphasis upon solidarity that characterized male social relations. Such solidarity could be maintained only through the release of latent aggression in a socially valued manner upon surrogate objects. Mundurucú warfare thus corresponds to Coser's (1955:48) formulation of the "safety valve" mechanism in society:

> Social systems provide for specific institutions which serve to drain off hostile and aggressive sentiments. These safety valve institutions help to maintain the system by preventing otherwise probable conflict or by reducing its disruptive effects. They provide substitute objects upon which to displace hostile sentiments, as well as means of abreaction. Through these safety valves, hostility is prevented from turning against its original object.

The achievement of specific ends or the defeat of a particular enemy were secondary considerations in Mundurucú warfare. They fought any group and they fought for the sake of fighting. The ultimate source of their bellicosity was the repressed hostility generated within the society, and the ultimate source of repression was the potential destructiveness of intrasocietal aggression.

Safety valve institutions of one kind or another are probably universal in culture. Coser (*ibid*:41) distinguishes two means by which aggressiveness may safely be released by the members of a society. These are:

> . . . Ventilations, which provide a socially sanctioned framework for carrying out conflict without leading to consequences that disrupt relations within a group, and those safety-valve institutions which serve to divert hostility onto substitute objects or which function as channels for cathartic release.

Mundurucú warfare and sorcery fall into the class of "safety-valve institutions"; the structure of the society is such that Ventilsitten would be impossible insofar as the Mundurucú cannot publicly acknowledge the existence of intrasocietal hostilities. The institutionalized public arguments and wrestling matches of the Trumai Indians (Murphy and Quain 1955:57–59) and the spear throwing bouts between Upper Xingú tribes (Galvão 1950:366) are illustrations of cases in which hostility is allowed to appear in a controlled and sanctioned context and is thereby dissipated. Sides are drawn and the issue is resolved among the Upper Xingú groups; the Mundurucú cannot even afford to take sides openly.

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Coser (1956:156–7) has considered the relationship between conflict and the rigidity of the social structure, which he defines as "the degree to which it disallows direct expression of antagonistic claims," and concludes:

> Our hypothesis, that the need for safety-valve institutions increases with the rigidity of the social system, may be extended to suggest that unrealistic [i.e. cathartic and not oriented toward the frustrating object] conflict may be expected to occur as a consequence of rigidity present in the social structure.

Mundurucú warfare was clearly "unrealistic" and the social structure was rigid in Coser's sense. It is possible to broaden our example to include a larger category of rigid social structures and to consider their functional concomitants. I would propose as a statistically testable hypothesis that matrilocal societies must repress open aggression in order to insure cohesion and continuity. If we take any matrilocal and matrilineal or bilateral society as our model, the system of residence tends to disperse males at least throughout the local community. Thus, any male will have close ties of kinship and economic interdependence with his housemates, his natal household, the households of his maternal uncles, and the households of his brothers. The same is true of patrilocal societies from the viewpoint of the women, but males are the principal political role-players in all human societies. Any conflict involving men therefore becomes a matter of deep community concern. As among the Mundurucú, if the lines of allegiance in a conflict situation are drawn according to kinship in any matrilocal society, bonds of local contiguity will be sundered; if primary loyalty is given to bonds of residence, the ties of kinship will be broken. In short, when the residence and kin groups of the male do not coincide, he acquires multiple commitments that may come into conflict. Also, the individual male will more readily repress his grievances if he cannot rely upon the full support of a solidary group.

Brief reference to the ethnographic literature suggests that the social solidarity of matrilocal groups is not restricted to my model. Writing of the Apinayé, Nimuendajú (1939:129) says:

> I have never heard of a case of rape nor witnessed anything of publicly scandalous adultery, larceny, or slander. Only when intoxicated do these natives inflict damage on property and bodily maltreatment on persons or commit manslaughter. Compared with any Šerente settlement the village of Bacaba, at least, is a model of internal peace and harmony, and this would hold for Gato Preto, too, in the absence of alcohol.

The Šerente and the Apinayé are Gê-speaking groups of eastern Brazil and are culturally quite similar. The principal difference between them is that the fractious Šerente are patrilineal and patrilocal, while the harmonious Apinayé are matrilineal and matrilocal. Turning to North America, we have the classical example of the matrilocal and "Apollonian" Pueblo ans. Ellis (1951:199) has noted of Pueblo warfare:

> Beyond protection, warfare served to provide legitimate outlet for the frustrations and aggressions arising from unpermitted competition or suspicions thereof among peoples of the same general culture.

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TAPPERS AND TRAPPERS: PARALLEL PROCESS IN ACCULTURATION[1]

I. The Problem

The purpose of this paper is to show how two cases of acculturation exemplify parallel processes of culture change, that is, cross-cultural regularities of function and causality, even though differences in outward form and substantive content are such that the acculturation might also be considered as convergent development.

As subsequent sections will show in detail, the Mundurucú of the Tapajós River in Brazil and the Northeastern Algonkians in Canada differed during pre-contact times in social structure, in the general nature of their culture, and in their cultural ecological adaptations. The first were tropical forest hunters and horticulturalists living in semi-permanent villages and given to warfare. The second were hunters of large migratory game and were losely organized in nomadic bands. Despite these differences, however, both represented roughly the same level of sociocultural integration. That is, individual families were related to one another through certain supra-familial patterns--village activities in the one case and band functions in the other--but the local unit in each instance was politically autonomous.

Since this paper is essentially an illustration of methodology, it is important to stress that the concept of level does not classify cultures according to concrete and substantive form and content. Different cultures may be wholly unlike in their particulars in that they are the products of distinctive area histories or traditions and of local adaptations to environments. At the same time, the largest integrated and autonomous social units may be of a similar order of inclusiveness. Whole, therefore, similarity of level must underly formulations of cross-cultural regularities, such similarity alone does not at all imply typological identity. The aboriginal tropical forest Mundurucú and the sub-arctic Algonkian hunters were wholly unlike in most cultural particulars and in social structure, although both were integrated on comparable sociocultural levels.

They were alike, however, in the acculturative processes to which they were subjected and in the final cultural type which is now emerging in both populations. The processes were similar in the special manner in which outside

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1. The acculturational phenomena described in this article were apparently found among many, although not all, Northeastern Algonkians, including native groups of New England as well as Canada. Speck, Steward, and others have considered this problem for many years. They were also found among certain Mackenzie Basin Athabaskans, as Jenness has shown. A very comparable case of acculturational process was studied by Steward among the British Columbia Carrier. These cases will be cited in the concluding comparative section. The Montagnais are taken as our principal example because Eleanor Leacock studied them in detail from this point of view.
The Mundurucu of Brazil are analyzed on the basis of a year of field research by Yolanda and Robert Murphy during 1952-53. The research was conducted under the sponsorship of the Department of Anthropology, Columbia University, and was made possible by a Research Training Fellowship granted by the Social Science Research Council and the William Bayard Cutting Traveling Fellowship, awarded through the Trustees of Columbia University.

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commercial influence led to reduction of the local level of integration from the band or village to the individual family and in the way in which the family became reintegrated as a marginal part of the much larger nation. The resultant culture type was similar in each case in that the local culture core contained the all-important outside factor of almost complete economic dependence upon trade goods which were exchanged for certain local produce and because the functional nature of local production, the family, and other features were directly related to this new element. The common factor postulated to have causal importance is a kind of economic activity--the collection of wild produce--which entailed highly similar ecological adaptations. While rubber production differs as greatly in particulars from fur trapping as the tropical forests differ from the sub-arctic barren-lands of Labrador, the result of the acculturative processes in the two cases was the independent emergence of the same type of culture, as defined in terms of level of integration and culture core. We shall use the latter term to denote the structural interrelationships of the basic institutions of the culture.

This case study should also help clarify the heuristic concept of cultural ecology, and especially to illustrate how fundamentally it differs from environmental determinism. It will be shown that total environment is in no way the decisive factor in the culture-environment relationship. In analyzing the creative processes in the adaptation of culture to environment, it is necessary to determine the crucial features in the environment that are selectively important to a culture of a particular level and a particular area tradition. In this sense, it does not matter how different the subarctic and the tropical forests are in their totality. The primary fact is that each environment afforded a resource for trade purposes which could best be exploited by individual families controlling these products within delimited territories. These products did not achieve importance until the native populations became parts of larger sociocultural systems and began to produce for outside markets in a mercantilist pattern.

The process of gradual shift from a subsistence economy to dependence upon trade is evidently irreversible, provided access to trade goods is maintained. It can be said, therefore, that the aboriginal culture is destined to be replaced by a new type which reaches its culmination when the responsible processes have run their course. The culmination point may be said to have been reached when the amount of activity devoted to production for trade grows to such an extent that it interferes with the aboriginal subsistence cycle and associated social organization and makes their continuance impossible.

II. Northeastern Algonkians

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Our discussion of the acculturation of the Northeastern Algonkians assumes that the family-owned fur-trapping territories widely reported among these Indians were post-white in origin. The supposition of Speck [1915; 1939; 1942], Cooper [1939], and Eiseley [1939; 1942; 1947] that such territories were aboriginal lacks support in early historical documents. Moreover, indisputable cases of post-white formation of family territories have been reported by Leacock among the Eastern Montagnais [1954], Jenness among certain of the Mackenzie Basin Athabaskans [1932, p. 257], and Steward among the British Columbia Carrier [1941]. Leacock's study [1954] deals with the processes of development of trapping territories in greatest detail and consequently provides the most illuminating material. We shall constantly refer to it in the following delineation of the aboriginal culture core and the subsequent changes in it.

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According to Leacock, the Eastern Montagnais formerly possessed very loosely integrated bands. The basic aboriginal social unit was the "multi-family" winter hunting group consisting of two to five families. These groups were nominally

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may pursue and kill deer or caribou on any fur area. In some instances, another may kill and take the meat of a beaver, provided only that he give the pelt to the man having exclusive rights to the furs within the territory in question.

Two basically different concepts of rights to resources within the same area co-exist, each justifiable and explainable in its own way: the right to hunt large game for subsistence purposes practically anywhere and the right to monopolize fur-bearing animals within prescribed areas. In British Columbia the provincial government recognized these differences some years ago and registered family owned trapping territories of the Carrier Indians and protected them by law while permitting moose-hunting anywhere.

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This end product of acculturation is substantially Leacock's third stage. The nuclear family now becomes the primary economic and social unit, and the old bonds of inter-familial economic dependency become attenuated. The new individualism has even penetrated the nuclear family. Among the Western Montagnais, the son of a trapper owns the beaver lodges which he discovers, whereas among the most acculturated of the Eastern group, only the family head may own such a resource.

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With the breakdown in interfamilial ties among the Northeastern Algonkians, the economic centers of gravity for the families are the trading posts. Leacock says:

> "The movement of trading posts has obviously been the most important factor determining recent shifts in the size and location of Montagnais bands. However, it would be wrong to infer from this that increasing dependence on trade has acted to destroy formerly stable social groups. The reverse seems to be closer to the truth--that the changes brought about by the fur trade have led to more stable bands with greater formal organization". [Ibid., p. 20]

Leacock gives the Seven Islands band as an example of this post-contact development. This new "band", however, is of a different order entirely than aboriginal hunting bands, for the principal bond between the members is that they all trade at the Seven Islands trading post. They claim no band territory; in fact, all present trends are towards familial tracts and not band lands. The modern band has a chief whose principal function is to act as intermediary with the Indian Agent. Also, the Indians refer to themselves as the "Seven Islands" (derived from the name of the trading post) people, and are so called by other Indians. In the interest of taxonomic clarity it is best not to describe such an arrangement as a "band". Such a group is reminiscent of the post-white Shoshoneans of the Great Basin, who classify themselves principally by reservation, for example, Warm Springs Paiute, Burns Paiute, Owyhee Shoshoni, and so forth. Prior to the Reorganization Act, the only basis for these groupings was common residence on a reservation and representation by a spokesman, who generally attained his position partly through prestige, but probably more importantly through recognition by the Indian Agent. Since the agents preferred "cooperative" men, the chiefs often did not truly represent the Indians. These reservation people, like Leacock's Seven Islands band, had little formal structure and a very limited raison d'etre. The stability of these groups is almost entirely a function of their linkage to the whites, an outside factor. Among the more acculturated Eastern Montagnais, the basic socio-economic unit appears to be the nuclear family.

III. The Mundurucú

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We shall discuss the Mundurucú in somewhat greater detail than the Algonkians not only because they are less known ethnographically but because the special

8: Murphy & Steward E-5 (1952-1953) 1956
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problem of acculturation toward individual families has not been adequately described for South America.

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The Mundurucú have been in active contact with European civilization for the last 160 years, of which only 80 years have been spent in rubber exploitation. The following description of the pre-rubber period Mundurucú does not purport to depict the pre-contact, or aboriginal, Mundurucú, but refers to the middle of the nineteenth century. Earlier changes in Mundurucú culture form the subject of another paper [Murphy 1955].

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The Mundurucú have inhabited the gallery forests and savannah lands east of the upper Tapajós River in the state of Pará, Brazil, for at least two centuries. The savannah in this region is quite limited, and the predominant flora are the high forest and thick vegetation typical of the Amazon basin. The Mundurucú chose the open country for their villages because remoteness from the larger streams afforded some protection from river-born enemy attack and relief from the swarms of insects which infest the river banks, while the absence of forests immediately adjoining the villages gave some security against the dawn surprise attacks favored by nearly all tribes of the region. These attacks were difficult to launch without cover. Since the Mundurucú used water transportation only slightly, isolation from the rivers was not a hardship.

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It has been noted that the nineteenth century Mundurucú and Northeastern Algonkians were on the same level of sociocultural integration. The simple, loosely-structured nomadic hunting bands of the Algonkians were roughly equivalent to the semi-sedentary villages of the Mundurucu. In both instances, the local group consisted of a multi-family, autonomous community. Under certain circumstances, the various Mundurucú villages tended to integrate on a tribal level, but there were no permanent trans-village political controls. That no Mundurucú village could function in isolation, since there was inter-village marriage and periodic cooperation in warfare and ceremonialism, does not necessarily imply a higher level of integration in economic or political activities. Similarly, it can be argued that Northeastern Algonkian bands were autonomous but by no means isolated from other such units.

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The Mundurucú and Algonkians were integrated on the same level, but their cultures differed structurally or typologically and in content. Patrilineal clans and moieties in Mundurucú society made kinship ties more extensive and pervasive. Village subsistence was based on slash-and-burn horticulture. Although the heavy work of clearing the forest was done by work groups consisting of all the village males, garden care and manioc processing were carried out by the women of the matrilocal extended family. The chief occupations of the men were hunting and warfare.

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Leacock's reconstruction of the aboriginal society of the Eastern Montagnais shows the nuclear family to have had greater functional importance than among the Mundurucú. The Montagnais family was a relatively stable unit within the shifting and amorphous hunting bands, whereas the Mundurucú pattern was the converse. Each Mundurucu household was a stable unit composed of women and their female offspring. The Mundurucú had the seeming paradox of matrilocal extended families in a society of patrilineal clans and moieties. The men married into these extended families from similar units in the same village or from other villages. However, there was no need to integrate a husband into the extended matrilocal family of the household, because the focus of his activities was the men's house. All males upon reaching adolescence slept in the men's house, which was located on the western perimeter of the circle of houses composing the village. The females of each household prepared and sent food to the men's house to be eaten in a communal meal. The men's house was also the center of male work and relaxation. The most immediate economic tie of a man to his wife's house was that he brought his daily take of game there. Communal distribution of game, however, made this economically

8: Murphy & Steward E-5 (1952-1953) 1956

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TAPPERS AND TRAPPERS

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The culmination of the long acculturative processes shows a high degree of structural parallelism. Both Mundurucú and Montagnais populations are divided into loosely integrated and dispersed communities centering about particular trading posts with which the individual families have ties. The Indians still recreate, associate, and intermarry with one another, but the nuclear family is now the stable socio-economic unit. It is the highest level of integration found among the native population itself, but it is linked to the nation through the intermediary of a regional economy. The integration of the family with the national level is highly specialized and limited. These families do not yet share a substantial part of the common denominator of the national culture or even of the regional sub-cultures of their non-Indian neighbors.

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There is a final phase, which, though occurring at different dates in the different localities, is characterized by assimilation of the Indians as a local sub-culture of the national sociocultural system and virtual loss of identity as Indians. At this point, the acculturational processes and results diverge, since the Indians participate to a much greater extent in the national culture. So long as the families maintain their marginal relation with the national society, they are quite unlike the basic populations of the nations in which they lived and much more like one another. When, however, they learn the national language, intermarry extensively with non-Indians, and acquire many of the non-Indian values and behavior patterns, they have to be classed with the special regional sub-cultures that have developed in portions of these nations.

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It can be predicted that the drastic shift in mode and level of integration will do much to hasten the loss of cultural distinctiveness. Fortes has cogently expressed the relationship between social structure and formal culture content in such a situation:

> "I would suggest that a culture is a unity insofar as it is tied to a bounded social structure. In this sense I would agree that the social structure is the foundation of the whole social life of any continuing society.....The social structure of a group does not exist without the customary norms and activities which work through it. We might safely conclude that where structure persists there must be some persistence of corresponding custom, and where custom survives there must be some structural basis for this" [Fortes 1953, pp. 22-23].

V. Further Comparisons

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We can delimit and refine the Mundurucú-Algonkian parallel by the cross-cultural examination of structural changes caused by acculturation in other areas. We will not seek further parallels, however, but will discuss cultures in which divergence appears manifest. One instance of such apparent divergence is the Northwest Coast, where the fur trade at first strengthened or intensified rather than weakened the aboriginal social structure. The florescence of the potlatch and class system on the Northwest Coast as a result of new wealth in trade goods is a thesis which has been ably expounded by a number of students [cf. Barnett 1938; Drucker 1939; Collins 1950; Codere 1950]. It would be very misleading, however, to consider any trade in furs as the crucial factor. What really matters is individual trapping of fur-bearing animals. The sea otter was the principal fur bartered by most Northwest Coast tribes, and collection involved neither individual effort nor delimited territories. The amount of land trapping was probably fairly limited and in any event did not offset the cultural effects of the great salmon wealth which created surpluses rarely if ever paralleled by hunting, gathering, and fishing people.

The trapping activities of the Skagit of Puget Sound more nearly paralleled those of the Northeastern Algonkians, according to Collins description [1950, p. 335]:

8: Murphy & Steward E-5 (1952-1953) 1956

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"The [trading] posts played an important part in altering the economy of the Indians. First, they encouraged a shift in their hunting habits. The skins in which the traders were most interested were beaver and land otter. These animals had small value in the aboriginal economy, since they were less desirable for food than deer or elk, for example. At the traders' behest, however, hunters pursued these animals eagerly. Another economic shift took place when the hunters, instead of killing game for meat, began to exchange skins for food."

The result of this trade was, however, quite different from its effects in Eastern Canada.

"The effects of these changes upon Skagit social organization were pronounced. Distinctions in social rank began to be more marked--a shift made possible since, though social mobility had always been within the grasp of any person of good descent who could acquire the distinction of wealth, new sources of wealth were now available" [Ibid., pp. 337-338].

The new wealth acquired by the Skagit was funnelled into the class structure and ultimately the potlatch. The difference, then, between the processes of change which occurred among Northwest Coast and Northeastern Canadian groups is that the former integrated the new wealth into a pre-existent class structure created and perpetuated by a fishing economy. Among the latter, since there were no cultural means or goals promoting the concentration of surplus wealth in the hands of a select few, the benefits rebounded to all persons. The same was true of Mundurucú society which also was unstratified. The differences between the Skagit on one hand as opposed to the Mundurucú and Montagnais on the other are attributable to the stratification of society among the former, which in turn is partially explainable by the greater aboriginal resources of the Skagit. In effect, this constitutes a difference of level of socio-cultural integration.

The impact of trapping upon a pre-existing social structure can be even better appraised among the Carrier of the interior of British Columbia, where the wealth in salmon was far less than on the coast. The fur trade among the Blackwater River Carrier involved intimate interaction with Northwest Coast groups, especially the Bella Coola. Goldman summarizes the effects of this contact upon the simple, bilateral Carrier hunting bands [1941, pp. 416-417]:

"Undoubtedly the Bella Coola, like all Northwest Coast tribes, became relatively wealthy as a result of this trade. And in Bella Coola where wealth was the decisive factor in building rank, the fur trade must have been particularly welcome. And the lowly interior Carrier who hunted for furs in order to trade with the Bella Coola, who traded them to the whites, became an important part of the scheme of elevating one's rank. Although a Bella Coola did not gain valuable prerogatives from a Carrier son-in-law, if he could get a monopoly upon his furs he could make enough wealth to purchase new prerogatives. And as the Bella Coola benefited by this trade, so did the Alkatcho Carrier. The latter took up products obtained on the coast and traded them to the Carrier villages eastward on the Blackwater River drainage. As they obtained guns and steel traps, economic productivity spurted so that they were able to build up the necessary property surpluses for potlatching. Potlatching obligations in turn stimulated economic activity, and the degree to which they were able to potlatch made possible the full integration of crests as honorific prerogatives.

Given our previous hypotheses, developments more or less parallel to those in Eastern Canada might be expected. But these Carrier did not trade with European traders; they dealt instead with stratified Northwest Coast tribes in the context of an economic system, the rationale of which was the validation of rank by potlatch. As the following example of the Stuart Lake Carrier suggests,

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direct trade with the whites and the end of potlatching result ultimately in the family trapping territory system.

The effect of the fur trade among the Carrier of Stuart Lake to the north of the Blackwater River ran a similar course but culminated in family trapping territories, according to Steward's research. In pre-white times, the wealth of salmon fisheries, although far less than those of the coastal tribes, had provided some surplus, while contacts with the Tsimshian of the Skeena River had introduced a pattern for channeling this surplus to nobles who controlled the fishing rights of large territories in the name of matrilineal moieties. This wealth circulated through small-scale potlatches. The fur trade, carried on directly with the whites more than through coastal contacts, created a new source of wealth and intensified the native pattern. Although furs were trapped by individual moiety members, a noble had rights to certain percentage of the furs taken in his moiety's territory.

In the course of about 50 years, however, several processes combined to bring about individual trapping territories as among the Indians of eastern Canada. Most importantly, the new wealth in trade goods brought hardward that was of value to individuals. Pressures mounted to force the nobles to divide the trapping territories among their own children rather than to pass them on intact to their sister's sons, who had traditionally inherited their titles and rights. This process was aided by the activities of the Catholic missionary-ethnologist Father Morice, who effectively undermined the native religious sanctions of the class of nobles, and by the government, which banned potlatching. The older pattern survives only in isolated localities, where it is carried on clandestinely. At Fort St. James on Stuart Lake, where there is located a Hudsons' Bay Trading Post and some few hundred whites and Indians, the processes have reached a culmination almost identical to that of the Montagnais.

> "Present-day Carrier society at Stuart Lake consists of individual families that have exclusive rights to certain trap-lines that are registered with and protected by the Provincial Government. The family is the kinship and economic unit" [Steward 1941, pp. 500-501].

It seems likely that the Blackwater River Carrier have not yet reached the final stage of acculturation. The same may be true of the Skagit. The critical consideration is whether wealth in salmon among these tribes was so great that it offset the importance of trapping. This was not the case at Stuart Lake. On the lower Skeena River, salmon are so important that canneries have been built, and the Tsimshian and Tlingit have given up fur trapping to become commercial fishermen and cannery laborers.

Certain Plans Indians in North America also engaged in the fur trade but developed in distinctive ways. This is another illustration of the need to examine specific features in the taking of furs. There is a significant ecological difference between the collection of fur on the Great Plains and in the coniferous forests of Canada that lies essentially in the difference between hunting and trapping. It is incomplete and misleading therefore to make comparisons simply on the basis of "fur trading". In the Great Plains, buffalo hides were the chief item traded, whereas in eastern Canada, small, non-gregarious and non-migratory animals were trapped. The trade on the Plains resulted in an emphasis upon the buffalo hunt beyond the needs of subsistence and served to strengthen the collective and cooperative techniques traditionally used in the pursuit of migratory herds. Moreover, band cohesion in the Plains was enhanced by acquisition of the horse and gun and by intensification of warfare, the latter carried on in part to obtain horses.

It is possible that a non-stratified society which acquires surplus wealth may develop a class structure, but this involves special conditions not ordinarily

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found among collectors of wild products. Some of the North American Plains Indians showed an incipient development of a class society in the late eighteenth and early nineteenth centuries, but the tribes were decimated by epidemics and overwhelmed by the advancing frontier when intensified wealth and significant prestige differences had begun to emerge. A parallel between the Plains and the Mundurucu can be found in the increased authority of chiefs owing to their functions as intermediaries between the traders and the Indians. Jablow notes such a florescence of political controls among the Cheyenne [1951, p. 86], and Lewis specifically states of Blackfoot trade [1942, p. 42]:

> "In periods of monopoly [of the Indian trade by one company] the fur trade has a positive effect, that is, it increased the prestige and authority of the chiefs. In periods of competition it has a disruptive effect, that is, it weakened the power of the chiefs."

The Plains band chief traded a commodity which was obtained by collective effort. The Mundurucú chief served as middleman in the pre-rubber period when trade in manioc flour, which was also communally produced, was of primary importance. But he eventually lost his position when individually produced rubber became predominant. The Tenetehara Indians of northeastern Brazil have been in contact with civilization longer than the Mundurucú, but, according to Wegley and Galvao, the village chiefs and extended family heads still have a central role in the trading of collectively produced manioc flour and palm oils [1949, pp. 26-30]. It seems apparent that, lacking some other basis for political authority, it is difficult for leaders to maintain control over trade in individually-produced goods.

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Our formulations, in effect, state that when certain acculturative factors, defined functionally rather than formally, are present, the core of a culture will change in expectable and predictable ways. These formulations assume the constancy of certain other preconditions, which, though well worth investigation of themselves, can be regarded as given factors for methodological purposes.

This can best be exemplified in our present cases by reference to the basic, though incompletely explained, acculturative factor common not only to the Mundurucu and Naskapi but to most primitive peoples throughout the world. This factor can be stated simply as follows: When goods manufactured by the industrialized nations with modern techniques become available through trade to aboriginal populations, the native people increasingly give up their home crafts in order to devote their efforts to producing specialized cash crops or other trade items in order to obtain more of the industrially made articles. The consequences of this simple though world-wide factor are enormous, even though they vary in local manifestation. The phenomenon is of such a high order of regularity that special explanations must be sought for the few departures from it.

The main hypothesis arising from the present study is that: When the people of an unstratified native society barter wild products found in extensive distribution and obtained through individual effort, the structure of the native culture will be destroyed, and the final culmination will be a culture type characterized by individual families having delimited rights to marketable resources and linked to the larger nation through trading centers. Tappers, trappers, and no doubt other collectors come under this general statement.

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●[2] **Mundurucú Indians, A Dual System of Ethics**

[101] The Mundurucú Indians, an aboriginal people of central Brazil, share with most of mankind a propensity to apply one moral standard to relationships among themselves and quite another to their conduct towards the rest of humanity. One may say that this phenomenon is universal. This paper shall maintain the view common to many social scientists that ethical values, whether norms implicit in observed behavior or overt ideals, are parts of social systems. It is to be expected, therefore, that desired and valued behavior will be different among members of any one system than between participants in different systems.

In a sense, all members of modern,

[p. 369 (B)]

[pp. 1-369 (A) not processed for the files. - Analyst]

121 complex societies are a part of the same social system. Therefore, the moral values of in-groups are commonly extended outward to a considerable degree. Moreover, the ethical norms reflected in everyday social interaction are complicated by class differences and other categories of sub-cultural variation. The individual is an actor in many situations, each of which prescribes rather different modes of behavior. He may be the bearer of several standards of ethics, which become manifest according to the particular status and role context in which he is acting. Our "real," as opposed to "ideal," values are heterogeneous in the extreme.

The complexity of our ethical values arises from the very complexity of the social structure of which they are an integral part. Beyond the realm of situationally desirable behavior, the general ideal value system, or thematic moral values, in Kluckhohn's terms, shows somewhat more uniformity and internal consistency.[1] But they are frequently in conflict with sentiments, which, while less lofty, are just as strongly value charged.

577 Since it is more simple, and because
156 it is less ambivalent, the Mundurucú ethic should provide some insight into our own. It varies from our own in degree of intensity of ingroup harmony and outgroup hostility and is perhaps

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1 Clyde Kluckhohn, "Values and Value-Orientations in the Theory of Action: an Exploration in Definition and Classification" in *Towards a General Theory of Action* (Talcott Parsons and Edward A. Shils, eds., Cambridge, 1952). [p.370(A)]

181 non-aggression to an extent compa-
577 rable to the Zuni Indians of Arizona; in this light their culture is Apollonian.

● 121 The apparent disparity between these two concepts of desirable conduct towards one's fellow man points to a weakness in the configurational approach of Benedict and others. According to their interpretation, ethics are a part of a central theme which pervades all aspects of any one culture and endows it with a total and unique pattern. If major ethical themes are analyzed, on the other hand, as being an integrated and integrative part of the social structure, moral values can be related in a functional and pluralistic way to the total culture. Such a dual system of ethics, when viewed functionally, does not have to show ideational consistency, for its rationality lies in the structure of the society and, ultimately, of the culture.

186 The major unifying theme of the Mundurucú view of humanity lies in the division which they make, explicitly and verbally, between those who are Mundurucú and those who are not. Only the former are called "people," while the latter are referred to categorically as "outlanders." In times
[609] past, all "outlanders" were considered to be enemies and proper objects of attack.

This is not a racial or genetic concept; the name "outlander" is frequently applied today to many fellow
[177] tribesmen who have adopted white men's ways to such an extent that they no longer operate within the closed circle of Mundurucú society. Further-

11: Murphy E-5 (1952-1953) 1958
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PREFACE

THIS MONOGRAPH is based primarily upon data gathered in the course of research among the Mundurucú Indians of the state of Pará, Brazil, in 1952 and 1953. The field work, in which my wife Yolanda and I collaborated, was conducted with the support of the William Bayard Cutting Traveling Fellowship, awarded by the Trustees of Columbia University, and a Research Training Fellowship from the Social Science Research Council. At the time of the investigation, we were graduate students in the Department of Anthropology of Columbia University, and our work was under the guidance of Professors Julian H. Steward and Charles Wagley.

The focus of the research was upon those changes in economic and social structure consequent upon the involvement of the Mundurucú in the rubber-extraction industry, but we set as a further goal the collection of as much ethnographic data as was possible during the year available. This aim was partly motivated by a desire to add to the information about South American Indian groups, but it was also felt that completely concentrated and problem-oriented research could be done only in cultures upon which a good background of reliable information was already available.

Actually, the Mundurucú are probably better known than most South American Indians, except for those few groups which have been the subject of prolonged and intensive study. This speaks less for the wealth of published data than for the poverty of our knowledge of the area. A certain amount of data is available from the early nineteenth-century explorations of Spix and Martius, and a fine source on Mundurucú culture in the latter part of the century is available in the report of the Brazilian engineer, Antonio M. G. Tocantins. More limited and fragmentary data are available in the work of Manoel Ayres de Cazal, Henry Walter Bates, William C. Farabee, João Barbosa Rodrigues, Henri Coudreau, José Monteiro Noronha, and Ricardo de Almeida Serra. Some excellent material has been published by the Franciscan missionaries to the Mundurucú, especially Fathers Albert Kruse and C. Strömer. Unfortunately, I have not had access to the information published by these priests and their colleagues in the *Provinzeitschrift der Franziskaner in Nordbrasilien*. The information available in most of the above sources is based upon limited residence among the Indians, and some contain most questionable data. None was written in the light of modern anthropological problems and theories or with the aid of contemporary field techniques.

Accordingly, my wife and I proceeded to gather as wide a range of data as was possible within the limits imposed by the necessity to accumulate material pertinent to our main interests. The present work represents one aspect of this research. The reader will see that a great deal of the native religion has been lost as a result of contact with Brazilian society, and certain items reported were not actually witnessed by me. It was continually necessary to resort to the memories of older Mundurucú, but we made every attempt to insure the reliability of our facts by cross-checking our data with several informants. I stated in the text which activities and beliefs are extinct and which are still practiced. The final

12:Murphy E-5 (1952-1953) 1960
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preface

This book has three principal aims: to present a picture of the life of a South American Indian tribe as it is today; to analyze the processes through which this society has evolved to its present form; and to relate conclusions derived from the study to the general body of anthropological theory. 12

The material on which the work is based was gathered by my wife and me during a field investigation among the Mundurucú Indians of the Tapajós River in the State of Pará, Brazil. I originally became interested in South American Indians (and anthropology) as a student in Professor Charles Wagley's courses in Columbia College. Later, during graduate study at Columbia, the Mundurucú at-

12: Murphy E-5 (1952-1953) 1960
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121 tracted my attention as a research possibility because the tribe had become differentiated into two distinct groups, one characterized by adherence to traditional ways and the other drastically modified. Since I was studying problems of social and economic change, I felt that the Mundurucú presented an opportunity for a "controlled comparison," to use Dr. Fred Eggan's words, between the two sections. I phrased my research proposals in these terms and carried out my intent in the field. Of our thirteen months in Brazil, from May, 1952, to June, 1953, we spent about five months each in a conservative village and in a more "modern" one.

This book does not present a general ethnography of Mundurucú culture; it is rather an analysis of economy and social structure, and their changes. The study of social relations in space and in time inevitably involves theory. I have not attempted to keep "theory" and "fact" rigidly compartmentalized, for facts are meaningless outside a frame of reference and theories are equally devoid of content unless based on substantive data. This is especially true in the present study, as some data appear incomprehensible until their proper position is seen in the light of theoretical assumptions.

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122 The field trip was supported by the William Bayard Cutting Traveling Fellowship, administered by Columbia University, and by a Research Training Fellowship awarded by the Social Science Research Council. Much of the writing of the book was done in 1957 with the support of a Faculty Summer Fellowship given by the University of California. Funds awarded by the Research Committee and the Institute of International Relations at the University of California made possible research assistance and typing. Mrs. Janet Seibert prepared the manuscript and was a continual source of help and encouragement.

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probe beneath the surface appearances. The Mundurucú were equally curious, and relentless to the exclusion of all personal privacy in their own ethnographic investigations on us. This is perhaps the worst part of field work, and it was more difficult for Yolanda than for me. The insect life forced her to dress in khakis, and only the canons of empiricism convinced the Mundurucú children—and many of the adults—that she was truly a female. The women shook her hammock before dawn to ask her if she was awake, and they made continuous and repetitive demands on her for bright glass beads. Her relations with the females were of a reciprocal nature; that she was another woman was more important than her role as a foreigner, and she was able to establish close rapport with them for field work. I, who did not hunt, fish, sow, or reap, could claim no such close identification with the men. Our research proceeded, and we found that there was still much that was distinctively Mundurucú below the veneer of material acquisitions. Beyond this, the grinding processes by which Mundurucú society had become transformed and is becoming transformed unfolded themselves through our observations of their continuing mode of existence. The headhunter's heritage, pale and secularized as it may be, was of consummate interest to us as social scientists.

This book, in essence, is the story of the relationship between the white man and the Mundurucú. It is a prosaic and simple tale, unadorned with episodes of valiant resistance and glory, and surprisingly lacking in oppression and suffering. But, perhaps for this reason, it contains an element of tragedy, because the processes of this history have worked inexorably upon Mundurucú society and cultrue for a century and a half and have brought a once proud people to the brink of social extinction.

The complex causes and processes of change in Mun-

12; Murphy E-5 (1952-1953) 1960
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THE SETTING

METHODOLOGY AND ORGANIZATION

This study undertakes to analyze the processes of change in economy and social structure operative among the Mundurucú at the time of this investigation and in the past. I have chosen to focus my attention on the economic and social structural categories rather than on the broader range of interest of the usual acculturation study, for I feel that it is here that the causes of social and cultural change, in general, are to be found. I use the term "cause" advisedly, for I know that it has been used, and misused, in a variety of contexts. I shall avoid interpretations of a finalistic or teleological nature, and I shall similarly eschew the particularism inherent in the concept of immediate causes. I will rather concentrate my interest on the sufficient causes underlying the emergence of new, or modified, social forms.

So far as society is a system, an organization—and this is inherent in the definition of society—the direction and effect of changes in the system will be governed by its component parts and its over-all nature. In short, sufficient causality lies in large part within the social structure, and the dynamics of social change need not be sought completely outside the unit under study. From this point of view, external forces producing certain effects in one system may have different results in another. This must be kept in mind, for it is only in this way that we can arrive at general laws of social and cultural change: laws that will not only tell why something happens or exists in one instance, but why it does not in another.

The search for causes of change leads into functional analysis of the Mundurucú social system. If understanding of how a system changes is to be obtained, it is necessary

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121 to know how the parts of the system are related to one another and to the totality. It is also necessary to understand how the system becomes a coherent and integrated set of social relationships in terms of observable behavior. I attempt to do this in the present work. A functional analysis of social structure has another important value, and one that is not fully utilized by anthropologists. Since a basic assumption of the method is that a system has internal coherence, it is possible to see clues to the past in items that do not fit into the present. This, of course, is reminiscent of the now unpopular use of "survivals" for purposes of historical reconstruction. I do not think, however, that I have engaged in a form of "conjectural" history. Rather, I have attempted to relate my clues, the nonfunctional and disfunctional items of the present, to the probable structure of Munduruc\u00fa society as it existed in the past. And I have attempted to marshal as much historical and ethnographic data as possible to validate my reconstructions. In this way, I have avoided speculations based on one or another shred of data and have remained within the framework of structural analysis. And, it might be added, I have thus tried to bring my historical material under the canons of internal criticism of historical data.

178 Economy and social structure have changed a great deal during the past century and a half of Munduruc\u00fa history, making the tribe an especially good subject for this type of study. I have relied to a certain extent on older informants for data of past conditions. The memories of the old people are variable in accuracy, richness, and content, and I tried where possible to corroborate points with a number of informants. It would, however, be naïve to assume that material obtained from an old informant, however well corroborated, is valid for the "aboriginal," or pre-contact, period. A sixty-year-old man—of whom there are

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very few among the Mundurucú—interviewed in 1952 was born in 1892. Since his most reliable recollections probably date from his adolescence, his memories of things seen and heard will be of value only for the time after about 1905—and I am being generous here. The period of 1905 and shortly thereafter is within the last decade of the rubber boom and is well over a century after the first contact between Mundurucú and whites. In short, it has been necessary to exercise great caution with these data.

A good deal of the data from informants were datable, within broad limits, by their context. Thus, when I heard that a duty of the chief in times past was to "buy goods for the people," I knew that I was not faced with the pristine. And, fortunately, there is some highly useful documentary history on the Mundurucú. One does not get a smooth historical continuum replete with detail, but it is possible to discern in the written records some of the large-scale changes that have taken place in the society. I have avoided the method, common in acculturation studies, of working with two cultural base lines, the aboriginal and the present, and comparing the two. This procedure may have some value when the transfer of items of culture from one society to another through diffusion is studied, but it does not lend itself to the analysis of the continual interplay of the forces of stability and change acting on a social system.

The Mundurucú present advantages for the student of social change. It has been said that there are three socially and culturally distinct Mundurucú populations, which differ in degree of change—a differentiation that took place only during the past twenty-five years as a result of migration. This study does not include the population of the Tapajós River, where Mundurucú society is most drastically changed, but concentrates on the people of the savan-

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121 nahs and the Cururú River. The differences between the
134 savannah villages and those of the Cururú, and between the modes of social life of the two groups in general, are profound, and I believe that they can be traced to the degree of participation in trade and the rubber-extraction industry. A comparison of the two groups is rewarding because it reveals two points of Mundurucú history. And since the savannah villages will probably be abandoned in a generation or two, and their residents will move also to the banks of the larger streams, a comparison also gives a glimpse of the future. Beyond these considerations, an element of control over the data is introduced. Processes of change that may be surmised to be at work in the savannah communities may be seen to have run their course on the Cururú. Conversely, we need not speculate on the antecedents of social structure on the Cururú River, for we see them on the savannahs.

128 I start my analysis with a presentation of Mundurucú
[127] history, based on published sources and information given by the priests of the Cururú mission. The next four chapters, the main body of the book, present general material on traditional Mundurucú culture and social structure in the savannah communities. The last of these four chapters, chapter 6, discusses the contemporary bases of social integration, and the centrifugal tendencies in Mundurucú society. This is also the logical place to discuss relations with the whites. Chapter 7 shifts attention to the Cururú River villages and analyzes the progressive disorganization of Mundurucú society there. The final chapter summarizes the findings on social change and discusses their implications for general anthropological theory.

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ever, the people of the village still maintain trade relations and their closest social contacts with the Cururú River settlements.

The other five communities are those which before the migration to the Cururú were farthest removed from its shores. A glance at the map will show that communication by water with the dwellers of that river is not feasible, and a two or three days' march would be necessary by land. Thus, geographical removal has combined with the social gulf that has arisen between campineiros and Cururú residents to make contact between the two groups most sporadic.

THE SAVANNAH VILLAGES

Most of the research in the savannahs was done in the village of Cabruá. The choice was made primarily for physiological and nonscholarly reasons; it had the least insects and the most food of all the villages. A vacant house was also available and ready to be occupied. Beyond considerations of creature comfort, Cabruá was suitable because it had the second largest population, several excellent old informants in residence, and it was a typical community of the more traditional type. Its five houses were arranged in the customary circle around a central plaza, and its male population lived in the traditional men's house. My wife and I accordingly settled in Cabruá during the second half of our Mundurucú sojourn.

The Mundurucú are essentially forest dwellers. Although their villages are on high savannahs, they depend on the resources of the forests and rivers for their subsistence. Their ecological adaptation does not differ greatly from that of other tropical forest tribes except in varying emphasis on different pursuits. Hunting, fishing, gathering, and gardening were and still are the basis of Mun-

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614 174 615 then it may be surmised that Mundurucú clans have undergone a basic process of segmentation. That such a process continued into recent centuries is indicated by the incomplete differentiation of these four clans. If it can be supposed that the four subclans would in time become increasingly independent of the parent group and would eventually assume their own names and tubö while maintaining a more nebulous bond through the common "companion" spirits, the end result would be a phratric alliance. There is no definitive proof for this hypothesis, but such a process is the only unitary explanation of the phenomena of phratries and subclans. The data given by informants on the relation between clans, phratries, and the spirit "companions of the trumpets" are irregular. Certain clans that should logically be linked by common spirits were said by informants to be unaffiliated; others were placed within the same phratry where no grounds for such linkage exist. This unevenness is reminiscent of the problems encountered by students of Pueblo clan and phratry organization. Depopulation and the weakening of broader kin groupings have obscured the intricacies of the system, making reconstruction most difficult. But the Mundurucú data do show a pronounced tendency toward consistency between phratric affiliation and shared "companion" spirits.

121 591 614 174 The creation of new clans by the internal segmentation of old ones has numerous parallels in other societies. Patrilineal clans frequently segment under conditions of an expanding population, which causes lineages to break off and establish themselves in new territory in search of adequate resources. The offshoot group in time becomes differentiated from the parent unit and may establish itself as a new clan, although maintaining some symbolic representation of its former connection. Such a budding proc-

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ess, however, is possible only if the patrilineal society is also patrilocal, because it assumes a localized group of related males who are subjected to a common pressure to seek fresh sources of subsistence, and who can move as a unit. Under a matrilocal residence rule, the budding of lineages from a parent clan is more difficult, because the male members of the matrilineage, who are after all the principal actors in authority and decision making, have no residential locus. This accords with George P. Murdock's observations on the relatively greater ease of fission of localized patrilineal clans;[6] it is also congruent with W. Robertson Smith's generalization that patrilineality (and patrilocality) are better adapted to the needs of an expanding society than matrilineality (and matrilocality).[7]

The structure of Mundurucú clanship points clearly to an antecedent rule of patrilocality. The view of Murdock,[8] Steward,[9] and Titiev,[10] among others, that a unilineal system of descent is based upon and grows out of a corresponding unilocal mode of residence would make this an attractive hypothesis even without the evidence that has been presented. Historical confirmation of the thesis is found in the writings of Martius. He reported that bridegrooms were obliged to spend several years in service to the father-in-law.[11] At the end of this period they probably returned to their natal dwellings, for Martius noted that a man could eject his wife if displeased with her.[12]

The time of the change from patrilocality with temporary matrilocality to permanent matrilocality is uncer-

[6] Murdock, 1949, pp. 214-215.
[7] Smith, 1903, p. 269.
[8] Murdock, 1949, p. 209.
[9] Steward, 1936, pp. 343-344.
[10] Titiev, 1943.
[11] Martius, 1867, p. 393.
[12] *Ibid.*, p. 393.

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602 628 619 trilineal clansmen through a matrilocal residence rule resulted in cross-cutting bonds of descent and residence that constituted the very web of intervillage relations. For example, a man who married a woman of another village and took up residence in the men's house there, has most complex allegiances. He observes a tie to his affinal relatives, and he is a member of a men's organization that includes fellow moiety members and perhaps some of his clan and phratry. But beyond the village, the man is linked to his parents and extended family, as well as to the men of his native community. Since his brothers might have become similarly scattered in marriage, his bonds extend also to their villages. Finally, he has ties with all his scattered clansmen. In short, the lack of localized patrilineages prevents the compartmental segmentation of the society along conjunctive lines of kinship and territory.

571 575 619 Integration was furthered also by such groups as the *Muchacha anyen* society, the men's ceremonial group known as the *Biu ii anyen* (Mothers of the Tapir), and the *Darek ii anyen* (Mothers of the Arrow), an organization to which all Mundurucú warriors belonged.

121 The thesis that contradictory modes of descent and residence are conducive to multicommunity, or tribal, integration is not new; Fred Eggan reached the same conclusion when weighing evidence that a similar organization existed among the Gros Ventre Indians.[1] And as early as 1917, A. L. Kroeber stated, with reference to the Zuni, the more general principle that the presence in a society of a number of social groups with overlapping membership results in "segmentations which produce an almost marvelous complexity, but can never break the national entity apart."[2] From the viewpoints of logic and empirical data,

[1] Eggan, 1937, p. 34.
[2] Kroeber, 1917, p. 183.

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this is a valid statement. But it conveys the impression that such integration is sufficient to social cohesion; actually interpenetrating modes of segmentation may make social adjustment a most delicate matter.

When considering the relation between structural integration and social solidarity, it may be well to keep in mind that life in society requires a degree of personal renunciation as a means of securing the corporate well-being. Conflicts in interest, between individuals or groups, are bound to follow in all human societies. The causes and intensity of conflict and the means by which it is resolved are, however, variables of the structure of the particular society. The open expression of hostility, we learn from the sociologist Georg Simmel,[3] may result in a readjustment of relations between groups that produces a measure of stability; the playing out of conflicts can thus promote the integration of a society through the correction of disbalances in power and by the cathartic release of aggression.[4] According to Meyer Fortes, battles between lineal groups in Tallensi society has just this effect.[5] But the Tallensi are significantly different from the Mundurucú. Both are patrilineal, but the former society has local groups based on patrilocal residence; conflict between kin groups is simultaneously conflict between local groups.

Conflict in Mundurucú society, on the other hand, cannot range along such simple segmental lines. The memberships of lineal groups and local groups do not coincide; in a conflict, people cannot align themselves with clan fellows, for this may well pit them against the members of

[3] Simmel, 1955.

[4] The latter corollary to Simmel's thesis has been more fully developed by Lewis Coser (1956).

[5] Fortes, 1945, pp. 240–244. See also Gluckman (1956) for a penetrating analysis of segmentary opposition and the part played by cross-cutting loyalties in the dampening of bend.

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8

the changing social system

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182 This study has analyzed how Mundurucú society operates to wrest a livelihood from its environment and the connected problem of personal and group relationships. In its focus on Mundurucú social structure and the processes by which this system becomes realized in action to form a coherent way of life, it has been a functional study. But unlike most functional studies, it has been plotted on the coördinate of social time in addition to that of social space. The Mundurucú social system has undergone major transformations, and it is impossible to understand fully what it *is* until some understanding is achieved of what it *was*, at least in its key institutions. And it is further necessary to consider the dynamics of the change, because the processes are still continuing. The student who would consider his data only from the point of view of the contribution of

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the elements of a society to its stability would miss the major problem area. Many social institutions and modes of action did little to maintain a smooth flow in the Mundurucú system of social relationships, and some tended to disrupt and destroy the fabric of the society. The working hypothesis used by social anthropologists that social systems tend to establish a new equilibrium when disturbed has great methodological merit but is of limited utility in the present case, because Mundurucú society is hurrying to its own demise.

If the social system has ceased to function smoothly, one might ask how this study can be called a functional analysis; and how Mundurucú society can be said to be systematized if there are great incongruities between its parts. These questions may be answered by stressing that the Mundurucú still maintain a social life, despite its manifold changes and internal strains. The presented data suggest that human societies are less bothered by inconsistencies than the social scientist, who abstracts and constructs his systems from a mass of observed behavior. Moreover, Mundurucú society was at no time fraught with absolute contradictions, and there remain important accommodations and adjustments between some of the central activities that make up the totality of their social life.

A major source of change resided in the fact that continuing and patterned relations have been established with another society, that of Amazon Brazil. The adaptation of institutions and modes of behavior to the new system of relationships with the whites called for corresponding adjustments in Mundurucú society itself. Beyond this, the Mundurucú were brought into contact with a larger world through the medium of the market, and the Indians became sensitized to its demands. These demands of the market changed in type of commodity sought and in

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177 182 amount, and the native social structure was directly affected.

That Mundurucú society was not isolated and was not 121 182 stable, were advantages to a functional analysis rather than disturbing factors. Through observation of change in a component part of a system, it was possible to examine and determine with some degree of verifiability the ramifications and strength of relationship between the changing part and other parts. Functional links of interdependency did indeed exist, and change had repercussions through at least part of the system. As A. R. Radcliffe-Brown phrased it: "It is a corollary of the hypothesis of the systemic connection of features of social life that changes in some features are likely to produce changes in other features." [1] Thus, the functionalist method, when used in the dimension of history, has led to the study of social causality. It further illustrated that the direction of change was profoundly influenced by the structure of Mundurucú society; in this way the social system acted as a field of plural determinants, and social change derived therefrom its order and regularity.

174 182 61 At the time when the tribe erupted so violently into history the Mundurucú were patrilineal and patrilocal and appear to have been undergoing expansion in population and territory. Their social structure was well adapted to such growth, because the equivalence of kin and territorial unit permitted a segmentation process whereby small kin-local groups split off from larger ones. The offspring units, composed of residential nuclei of patrilineally related males and their wives, were miniatures of the parent groups, and they maintained a relation with the parent units through the over-all structure of lineage, subclan,

[1] Radcliffe-Brown, 1952, p. 7.

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the former because the history of a change to matrilocality accompanied by the production of a garden surplus is documented. If no such historical information were available, one would probably state the generalization in the latter terms. The statements are, however, the same. But the causality is not quite so simple and mechanistic, the functional relation not exactly one to one. It was stated earlier that so far as change takes place in a system of functionally interrelated parts, it correspondingly occurs in a field of plural determinants. In the present case, this is manifest in the fact that matrilocality could occur in a patrilineal society and in the peculiar kind of matrilocality that emerged.

Murdock has argued convincingly that a patrilineal and patrilocal society imposes great obstacles to the development of matrilocality.[2] He presents in illustration a model of such a group, but one in which the kin-territorial unit possesses corporate rights to land. Under these conditions, he reasons, it would be difficult to impose the relinquishment of such rights on the members of the units. I share Murdock's view, but it must be remembered that there were no institutions of private or corporate ownership of productive resources among the Mundurucú. The lineages no doubt were significant coöperative units in production, and collective units in consumption, and had important political functions; but their only corporate proprietary rights were of a ceremonial nature. The individual male was, therefore, not faced with estrangement from economic resources in which he had a vested interest, nor with the problem that matrilocality would impose in the passing of such rights to his sons.

Beyond the question of property ownership, other possible inhibitions to matrilocality may be discerned. The

[2] Murdock, 1949, pp. 216–218.

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structure of authority must have followed closely along lines of patrilineal kinship in patrilocal times. Under the new conditions, the man was not only assigned to permanent proximity to the father-in-law and his house, but was left with no unit in which he could exercise a political role. The Hopi man, for example, may move to his wife's household upon marriage, but he rarely moves out of the village; and he maintains an important position in his own lineage. But, on the other hand, the rule of matrilocality in a patrilineal society leaves a man without a lineage in which he may hold membership or play a political role. That the man had no important rights and duties in his natal household undoubtedly contributed to the persistence of intervillage marriages despite his consequent departure for a new locality. But this raised other problems, for life in a new village placed the man under different leadership and away from a solidary group of kinsmen. The situation was partly resolved by allowing the men to continue residence in the men's house beyond the normal period of bride service. Thus, young married men remained independent of the households of their wives during the early years of marriage and became more fully integrated into them after they had been married for several years. By this time, age and seniority allowed them to become significant figures in the extended family; they were no longer potentially at the mercy of the father-in-law. Matrilocality did not bring the man into another patrilineage under the new circumstances, because the father-in-law was also an outsider. The man's ultimate increased participation in the life of the household was correspondingly eased.

That Mundurucú society gave all members free access to natural resources and had a preëxistent men's-house organization are important to an understanding of the change in residence rules. The two factors were struc-

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177 182 439 648 primary function is in mediating the dictates of the market to the Indians in a personalized and understandable idiom.

182 439 591 The external market cannot be taken as a constant factor in this study, for it is subject to the fluctuations and movements that characterize the history of capitalism. The returns that it offers are variable, and the inducement of the Indians to produce for it varies somewhat. But, more important, different commodities have been sought in the Amazon at different periods, and the form of labor that has gone into their production has accordingly changed. This has impinged not only on the division and organization of labor, but has altered fundamental residence rules, transformed the framework of every-day social relationships, and changed in size and constitution the basic groupings of the society. Mundurucú society underwent 182 591 one such major modification in the transition from patrilocality to matrilocality. And it is now undergoing a second in the destruction of unilocal residence and the fragmentation of larger village and familial units. Murdock[4] is fully [114] corroborated in his observation that social organizations are most easily modified through a modification of the rule of residence—as he is in so many of his comments on relevant factors in social change. The rule of residence, in turn, varies with the productive relations in the ecological adaptation. It is in this way that the form of social groups is conditioned by their functions as units of production and consumption.

114 121 171 182 The transformations of the Mundurucú social system can best be understood in terms of its structured relations with other social systems and the immediate means, technical and social, by which selected resources are exploited. That these factors have a broader relevance can be best

[4] *Ibid.*, pp. 201–202.

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determined comparatively: cross-cultural studies of social and cultural change may well use the factors of ecological adaptation and types of relationship between social systems as constants. This is a different common denominator than the genetic one suggested by Fred Eggan as a means toward controlled comparison,[5] but it has been used by Steward and myself in a comparative analysis of the rubber-tapping Mundurúcú and the Indian trappers of Canada.[6] In the latter study, we attempted to demonstrate that the two populations experienced similar relationships with mercantilist, extraction economies, which entailed similar ecological adaptations. Both groups underwent disturbances of traditional patterns of postmarital residence; and both eventually underwent transitions in which the population became reorganized into loose aggregations in which larger bonds of economic dependency were transferred to patrons.

Finally the relevance of the present work for the study of "acculturation" must be considered, for I have given little attention to the borrowing of the symbolic forms of Western culture by the Mundurucú. The term "acculturation" has had a varied history and much ink has been spilled over its definition. It is generally defined as comprising those changes that take place as a consequence of culture contact. Its application in the past, however, has usually referred to the absorption of the content of European culture by a primitive group. Acculturation studies have been characterized by a concern with the phenomenon of diffusion, although on a large scale, and with the processes through which the content of other cultures is accepted and incorporated. Although such studies are interesting and valuable, I have not chosen acculturation as

[5] Eggan, 1954.
[6] Murphy and Steward, 1956.

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the central problem of this work. It might be asked whether the classical culture-historical emphasis of acculturation studies would have elucidated or confused some of the central issues of Mundurucú social change. Could the development of matrilocality have been understood in these terms? Or could the fact that family organization among the Mundurucú of the Cururú River is converging with that prevalent among the Brazilian population of the region be clarified by noting their intercourse with celibate German priests? It is true that the priests have encouraged the independence of the nuclear family, but how does this also explain a similar process of fragmentation among the Indians without close contact with the missionaries? Also, it cannot be denied that the adoption of Brazilian forms of dancing and tonsure, of dresses and guitars, are significant because they constitute breaks in the symbolic barriers between the Mundurucú and the whites and, in effect, bespeak alienation from the past. But were not these barriers already shattered and was not the major part of the population already alienated from their heritage by other factors?

The necessities of existence and the ways in which people and peoples interrelate should be the central problems for the student of culture change—as they are for the persons caught in the process. These, and not man's propensity to imitate, cause the fundamental alterations of a way of life. The question is perhaps too often phrased as "how *have* cultures changed" rather than "how *do* they change." The former leads to description, the latter to theory.

A recent report by a Social Science Research Council seminar on acculturation has expanded the outmoded definition of acculturation as simple transmission of culture between groups in contact to include almost anything that happens when "conjunctive" relations are established be-

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tween groups.[7] Since this comprehends everything, it might be asked how this differs from simple "culture change." It would appear that the difficulties of the seminar on acculturation derive primarily from the fact that they have no general theory of social and cultural change nor do they distinguish the two processes. It is for this reason that "acculturation" has been looked upon as a special set of processes despite the fact that examples of groups that have no "conjunctive relations" with other groups are hard to find. It is manifest in the statement of the Social Science Research Council seminar [8] that: "The change that is induced by contact therefore does not represent a shift from a static to an active state but rather *a shift from one sort of change to another.*" Granting the sudden and dramatic effects of the Gatling gun and the Indian reservation, this assumption defeats theory. If we are ever to formulate general laws of social and cultural change, we must rid ourselves of the notion of situational uniqueness. The latter may have operational utility for the traditional historian, but certainly has none for the generalizing social scientist.

[7] Social Science Research Council, 1954.
[8] *Ibid.*, p. 948 (italics mine).

/4 cont./

114 Tocantins appears to have provided some additional materials on Mundurukú agriculture. But his work is not available to me at the moment.

*241 [22] The Handbook of South American Indians summarizes the subject in these few lines: "The Mundurukú subsist partly on horticulture and partly on hunting, fishing and gathering. Tocantins' (1877) list of plants cultivated by them includes two species of manioc, sweet potato, pineapple, sugar cane, various peppers and beans, and several species of bananas. Other authors mention cotton, tobacco and genipa. Tocantins names some 30 noncultivated plants utilized in Mundurucu economy." (6)

6. Horton, 1948: 273.

*241 •12 [171] And this is all, more or less, that is known of these Indians' agriculture. The present article, therefore, attempts to amplify this knowledge, although the author is well aware that in many respects, and especially regarding garden methods, the Mundurukú system does not differ materially from that of other tribes in the region, or in the Amazon basin in general. /5/ Practical experience in the matter teaches us that agriculture among the Indians of the Amazon forest allows for slight variations, but not for basic differences.

II. Garden methods

If we regard the agriculture of the Mundurukú Indians as a culture complex, we can easily single out two distinct elements. One is the purely material, manual, or technical element, which will be discussed here. The other is made up of various social factors which render agriculture not a lifeless task or factor, lacking all influence, not an isolated complex within the tribe, but something vitally integrated into tribal life, something upon which the well-being of the community and of the family now depend. In this sense, [182] agriculture itself becomes a social element in native life. (7)